

Automation in an Agile implementation

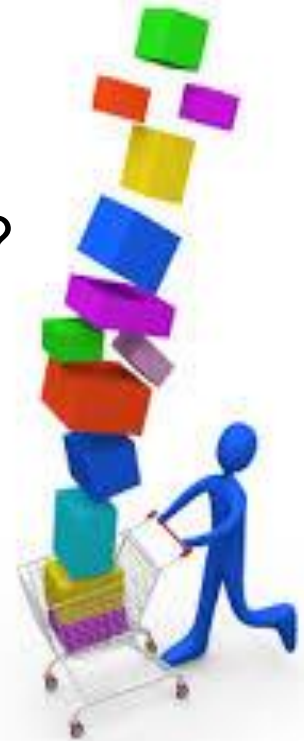
The National Conference of the Israel
Society for Quality - 2015

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The logo for AgileSparks features the word "Agile" in blue and "Sparks" in green. A small, multi-pointed starburst icon is positioned above the letter 'S' in "Sparks".

Our Backlog

- WHY do we need it?
- WHAT stopping us from doing it?
 - The challenges
 - Why typical automation formula is broken?
- HOW do we start?
 - Change patterns
 - Sharing ownership
 - Agile planning for automation



Automation Cloud

Why do we need it?

**Increase
Productivity**

**Increase Time to
market**

**Create Built in
quality**

**Embrace
change**

Minimize the cost of changing

**Begin with the end
in mind**

**Free up time for
more important
tasks**

**Create an environment for
Continuance improvements**

**Keep a Sustainable
velocity of the team**

**Ensure reliable system
at any given moment**

Reduce risk

**Create an environment in which people feel safe to promote changes
and focus on value**

Automation Cloud

Why is it broken?

No resources

No time

It's someone else's business

No skills in QA

**Cycle time between
feature development
and automation is long**

**Expensive time to transfer
system requirements**

**Bottleneck
of experts**

High maintainability

**No automation infrastructure
ready**

Creates a silo environment removed from the development effort

Typical Automation Formula

- Most testing done by QA
 - Mostly manually through the GUI
 - Record & Play automation
- Purchase an expensive GUI test execution tool
- Define a lot of paper test procedures
- Hire an automation team to automate each one
- Build a comprehensive test library and framework
- Keep fixing it

*This can work if
your product is
very easy to test
and it doesn't
change much...*



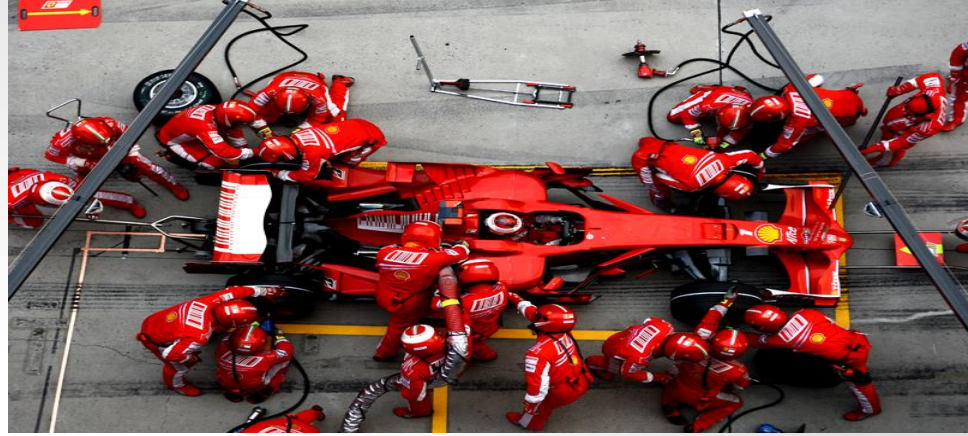
**Automation is a
USEFUL skill for
Testers/ Quality
Engineers**

NOT their core skill!

**It IS a core team/org
capability for enabling
Continuous Quality**



Change the formula: Shared ownership



- **Automation champion** ensures test infrastructure
- **Test Experts** provide the direction (test design)
- **Test/Dev Engineers**, implement the detailed tests, the infrastructure
- **Test experts** do exploratory testing and apply the thinking unique to Testing

What happens when ownership is shared

- Drives the system to be more testable
- Better test automation maintainability / architecture (especially in complex systems)
- Unit testing utilized when possible – now DEV has an incentive to make test automation more efficient
- The “test automation tasks first to go” syndrome is avoided...
- Acceptance Test Driven Design

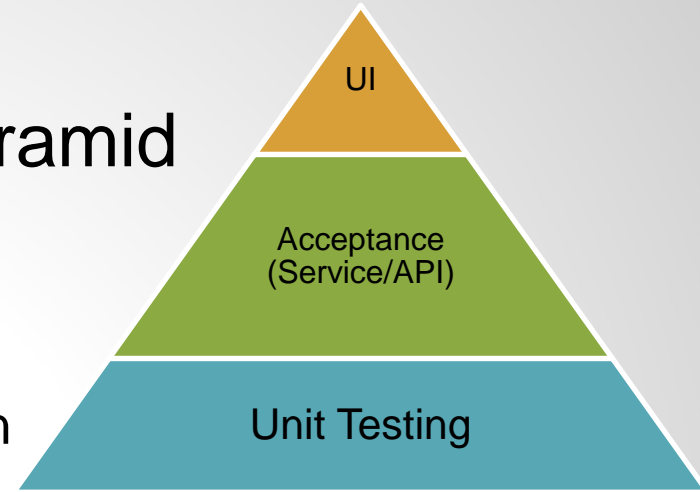
HOW do we start?

- Automation in Sprint0
- Automation as part of DONE
- Automation as part of the pipeline and not a separate “project”
- Legacy automation applied incrementally for risky areas, sanity and repairing touch points as new features added.

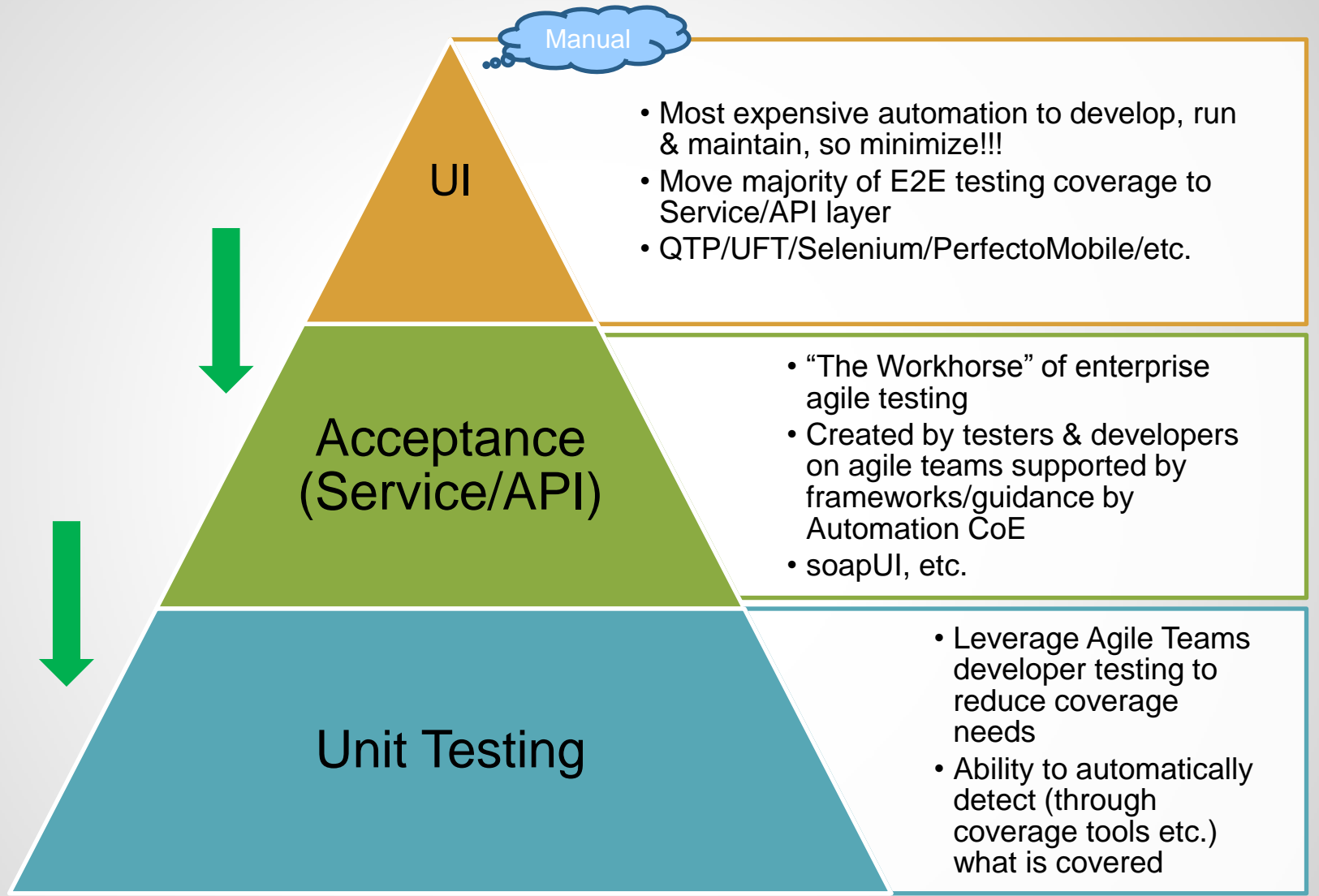


Automation Test design approach

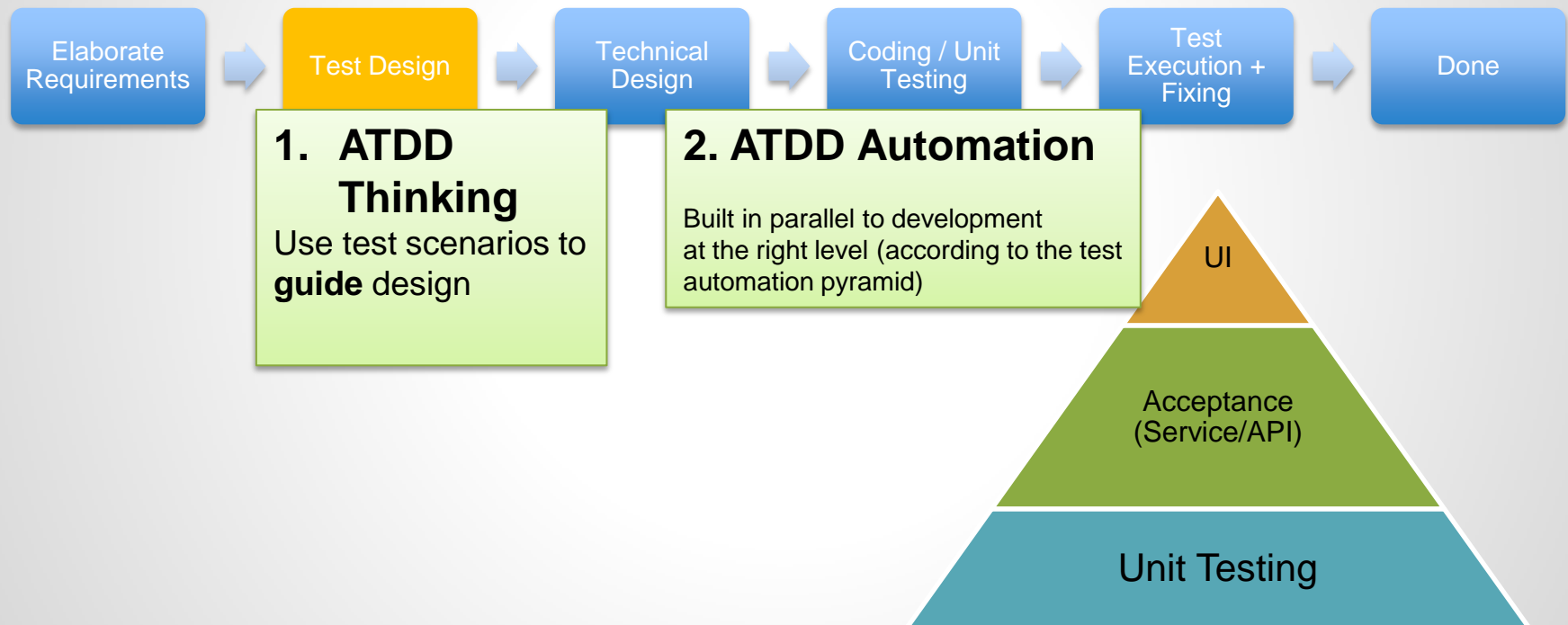
- Push automation down the pyramid
- Independent
 - Set up test data before run, Teardown
- Clear/single Meaningful goal
- Automate a “steel thread” at a time and expand
 - based on risk assessment (difficult to automate, frequently used, sensitive area)
- Break into testable, independent segments



Automation Pyramid



Whole Team Automation guided by ATDD thinking and the Test Automation Pyramid

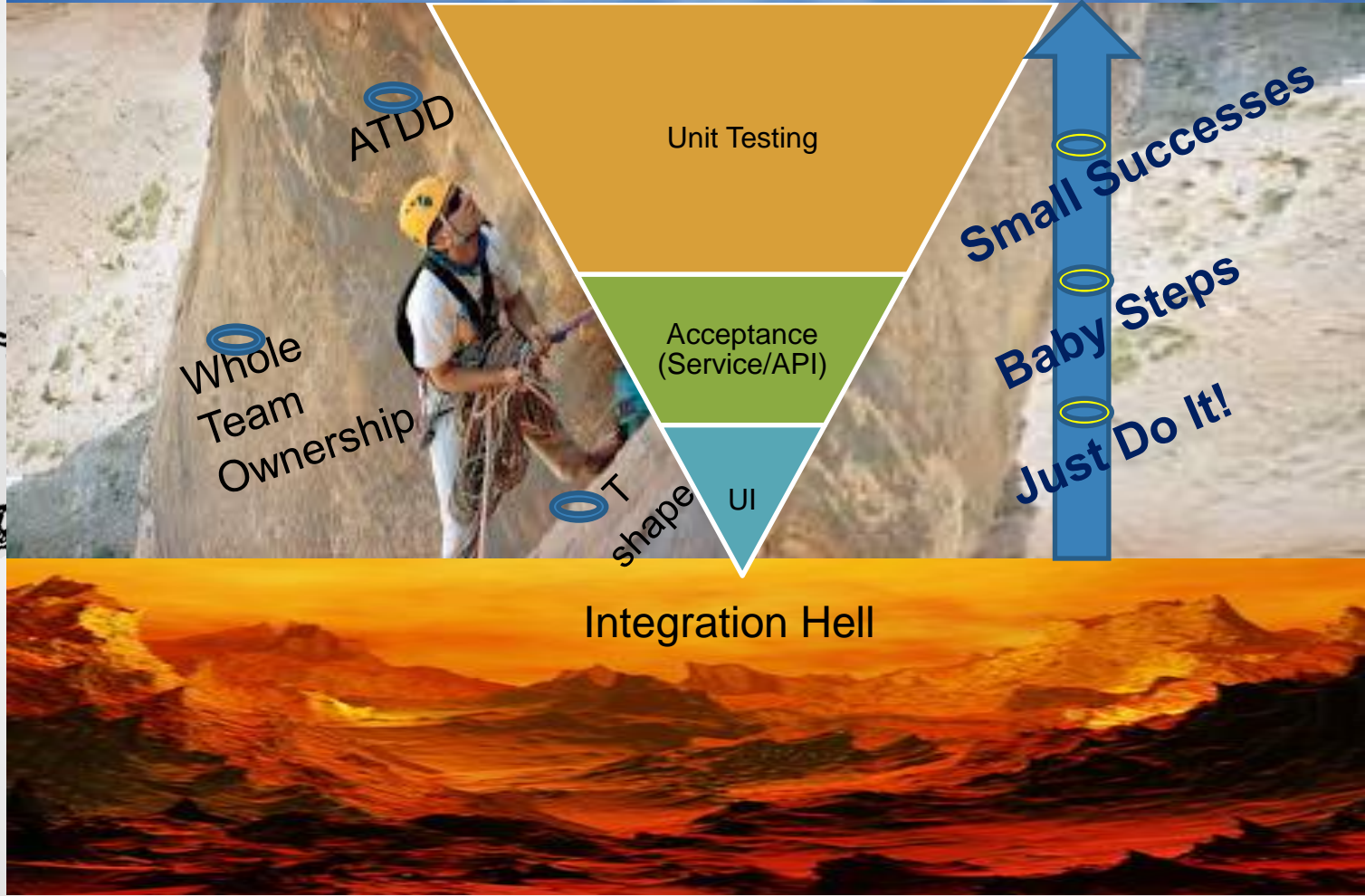


ATDD = Acceptance Test Driven Development -
Build Quality Into Design –
preventing defects rather than just finding them

Takeaways/ Recommendations

- Invest in automation, environments, knowledge in order to left-shift the riskiest test tiers while keeping overheads reasonable
- Automation as part of DONE is the way teams actually make it happen
- Whole team ownership of automation is essential to having a healthy agile team
- Test Engineering != Automation Engineering. Each are important roles on a healthy cross-functional agile team.
- Approaches like ATDD automation help unbundle these roles.

Continuance Integration



Auto Expert

